

Jan Delaval

120310  
Access DB#

## SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sabika Bazi Examiner #: 74141 Date: 4/23/04  
 Art Unit: 1616 Phone Number: 28622 Serial Number: 10/007452  
 Mail Box and Bldg Room Location: 4670 Rem. 4A45 Results Format Preferred (circle): PAPER DISK E-MAIL

if more than one search is submitted, please prioritize searches in order of need.

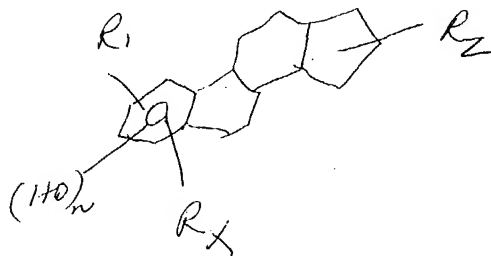
\*\*\*\*\*

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc. if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Modified, hydroxy-substituted, aromatic structures having cytoprotective activity  
 Inventors (please provide full names): Douglas F. Covey  
 Earliest Priority Filing Date: 11/3/2000

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for compounds of class 1



Please see attached sheets  
 Thank you!

## STAFF USE ONLY

Searcher: Jan  
 Searcher Phone #: 22504  
 Searcher Location: \_\_\_\_\_  
 Date Searcher Picked Up: 4/24  
 Date Completed: 4/24  
 Searcher Time & Review Time: \_\_\_\_\_  
 Clerical Prep Time: 15  
 Online Time: 130

## Type of Search

NA Sequence (#) \_\_\_\_\_  
 AA Sequence (#) \_\_\_\_\_  
 Structure (#) ☒  
 Bibliographic \_\_\_\_\_  
 Citation \_\_\_\_\_  
 Fulltext \_\_\_\_\_  
 Patent Family \_\_\_\_\_  
 Other \_\_\_\_\_

## Vendors and cost where applicable

STN ☒  
 Dialog \_\_\_\_\_  
 Questel/Orbit \_\_\_\_\_  
 Dr. Link \_\_\_\_\_  
 Lexis/Nexis \_\_\_\_\_  
 Sequence Systems \_\_\_\_\_  
 WWW/Internet \_\_\_\_\_  
 Other (specify) \_\_\_\_\_

=> fil reg

FILE 'REGISTRY' ENTERED AT 13:00:07 ON 24 APR 2004

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2004 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 23 APR 2004 HIGHEST RN 676578-75-9

DICTIONARY FILE UPDATES: 23 APR 2004 HIGHEST RN 676578-75-9

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

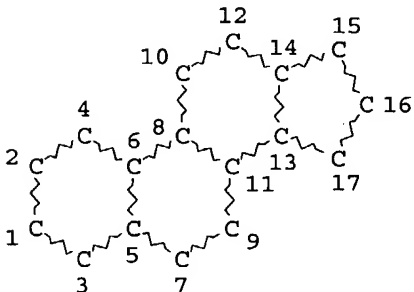
Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:

<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sta que l30

L8 83954 SEA FILE=REGISTRY ABB=ON PLU=ON C5-C6-C6-C6/ES AND NR>=5

L9 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

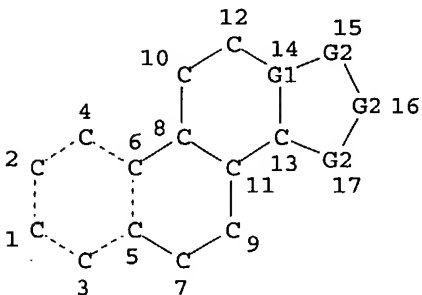
RSPEC 1

NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE

L11 78379 SEA FILE=REGISTRY SUB=L8 SSS FUL L9

L12 STR



C—Ak  
@18 19

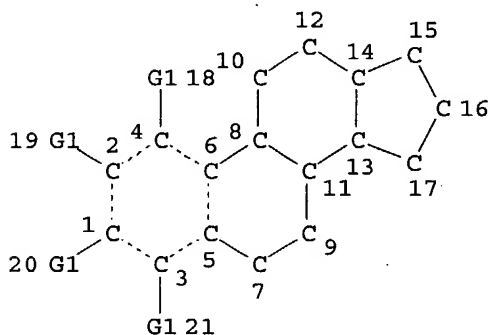
C—OH  
@20 21

C=O  
@22 23

VAR G1=C/18  
 VAR G2=C/18/20/22  
 NODE ATTRIBUTES:  
 CONNECT IS M1 RC AT 1  
 CONNECT IS M1 RC AT 2  
 CONNECT IS M1 RC AT 3  
 CONNECT IS M1 RC AT 4  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC 1  
 NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE  
 L14 1600 SEA FILE=REGISTRY SUB=L11 CSS FUL L12  
 L22 STR



VAR G1=OH/CY/H/AK  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC 1  
 NUMBER OF NODES IS 21

STEREO ATTRIBUTES: NONE  
 L23 SCR 1700  
 L25 323 SEA FILE=REGISTRY SUB=L14 SSS FUL L22 AND L23  
 L26 150 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND (IDS OR MXS OR PMS  
 OR CCS OR AYS OR MNS)/CI  
 L27 173 SEA FILE=REGISTRY ABB=ON PLU=ON L25 NOT L26  
 L28 57 SEA FILE=REGISTRY ABB=ON PLU=ON L27 AND NC>=2  
 L29 116 SEA FILE=REGISTRY ABB=ON PLU=ON L27 NOT L28  
 L30 13 SEA FILE=REGISTRY ABB=ON PLU=ON L29 AND 638/RID

=> d his

(FILE 'HOME' ENTERED AT 12:38:42 ON 24 APR 2004)  
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 12:38:59 ON 24 APR 2004

L1 1 S US20020103178/PN OR (WO2001-US46924 OR US2000-245791#)/AP, PRN  
 E COVEY D/AU  
 L2 199 S E7,E11,E12  
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 12:40:09 ON 24 APR 2004

L3 31 S E1-E31  
L4 11 S L3 AND NR>=5  
L5 STR  
L6 SCR 1842  
L7 50 S L5 AND L6  
E C5-C6-C6-C6/ES  
L8 83954 S E3 AND NR>=5  
L9 STR L5  
L10 50 S L9 SAM SUB=L8  
L11 78379 S L9 FUL SUB=L8  
L12 STR L5  
L13 50 S L12 CSS SAM SUB=L11  
L14 1600 S L12 CSS FUL SUB=L11  
SAV L14 QAZI007/A  
L15 STR L12  
L16 0 S L15 CSS SAM SUB=L14  
L17 50 S L15 SAM SUB=L14  
L18 STR L12  
L19 0 S L18 SAM SUB=L14  
L20 STR L18  
L21 0 S L20 SAM SUB=L14  
L22 STR L5  
L23 SCR 1700  
L24 14 S L22 AND L23 SAM SUB=L14  
L25 323 S L22 AND L23 FUL SUB=L14  
SAV L25 QAZI007A/A  
L26 150 S L25 AND (IDS OR MXS OR PMS OR CCS OR AYS OR MNS)/CI  
L27 173 S L25 NOT L26  
L28 57 S L27 AND NC>=2  
L29 116 S L27 NOT L28  
L30 13 S L29 AND 638/RID  
L31 103 S L29 NOT L30  
L32 57 S L31 AND NR>=6  
L33 46 S L31 NOT L32  
L34 13 S L4,L30  
SAV L30 QAZI007B/A

FILE 'HCAOLD' ENTERED AT 12:59:37 ON 24 APR 2004

L35 0 S L34

FILE 'HCAPLUS' ENTERED AT 12:59:39 ON 24 APR 2004

L36 5 S L34  
L37 3 S L36 AND L1,L2  
L38 5 S L36,L37

FILE 'USPATFULL, USPAT2' ENTERED AT 12:59:57 ON 24 APR 2004

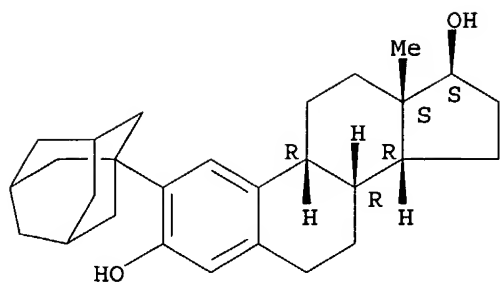
L39 2 S L34

FILE 'REGISTRY' ENTERED AT 13:00:07 ON 24 APR 2004

=&gt; d ide can tot l34

L34 ANSWER 1 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 535921-41-6 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1<sup>3</sup>,7]dec-1-yl-,  
(9 $\beta$ ,14 $\beta$ ,17 $\beta$ )-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C28 H38 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

Absolute stereochemistry.



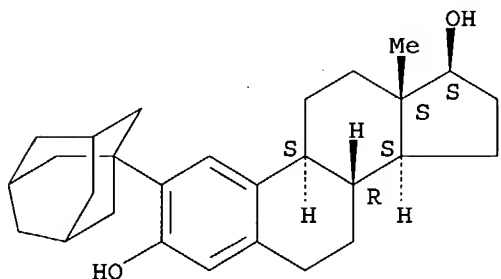
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:987

L34 ANSWER 2 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 444571-93-1 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(17β)-(9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C28 H38 O2  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER

Absolute stereochemistry.



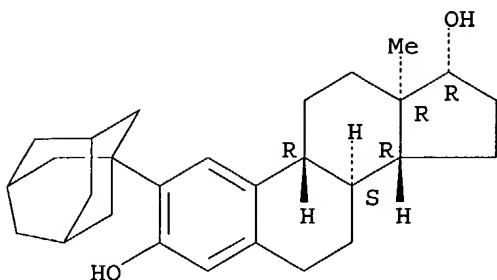
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:135223

L34 ANSWER 3 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422566-94-7 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(8α,9β,13α,14β,17α)-(9CI) (CA INDEX NAME)  
OTHER NAMES:  
CN ZYC 33  
FS STEREOSEARCH  
MF C28 H38 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

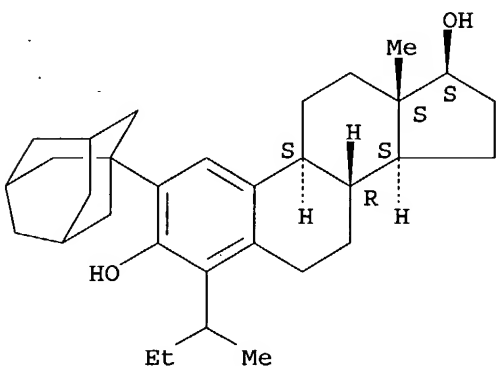
REFERENCE 1: 136:369889

L34 ANSWER 4 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422509-02-2 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17β)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN ZYC 26  
FS STEREOSEARCH  
MF C32 H46 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

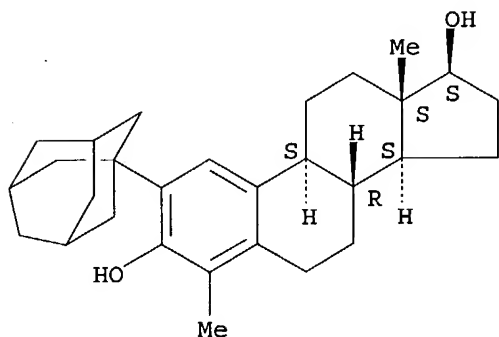
1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 5 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422509-01-1 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 4-methyl-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17β)- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH

MF C29 H40 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

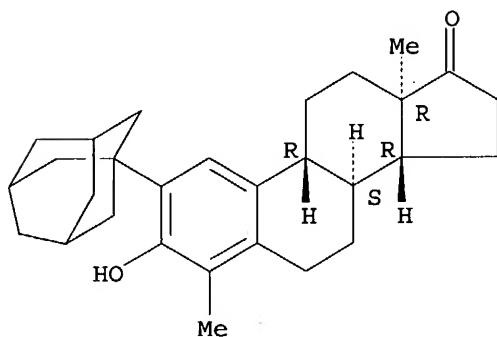
REFERENCE 1: 136:369889

L34 ANSWER 6 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
 RN 422509-00-0 REGISTRY  
 CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-4-methyl-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (8α,9β,13α,14β)- (9CI) (CA INDEX NAME)

OTHER NAMES:

CN ZYC 22  
 FS STEREOSEARCH  
 MF C29 H38 O2  
 SR CA  
 LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



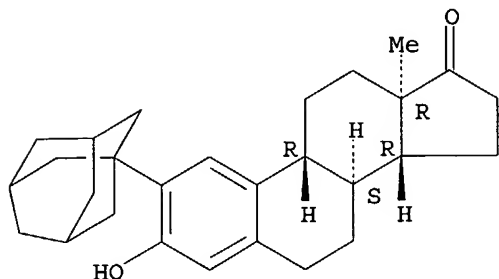
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 7 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422508-99-4 REGISTRY  
CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-,  
(8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ) - (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C28 H36 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



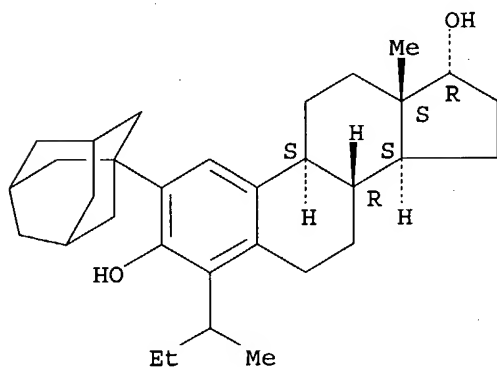
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 8 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422508-97-2 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-, (17 $\alpha$ ) - (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C32 H46 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)



REFERENCE 1: 136:369889

L34 ANSWER 9 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN

RN 422508-96-1 REGISTRY

CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-,  
(17 $\alpha$ )-(9CI) (CA INDEX NAME)

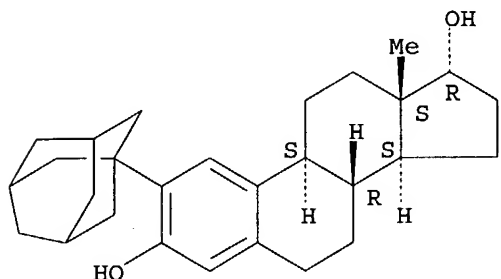
FS STEREOSEARCH

MF C28 H38 O2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 10 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN

RN 422508-95-0 REGISTRY

CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-  
tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-, (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$ p  
ha.)-(9CI) (CA INDEX NAME)

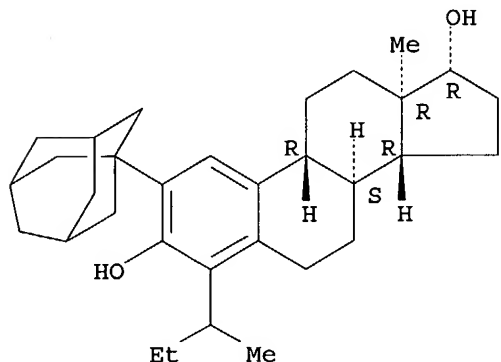
FS STEREOSEARCH

MF C32 H46 O2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



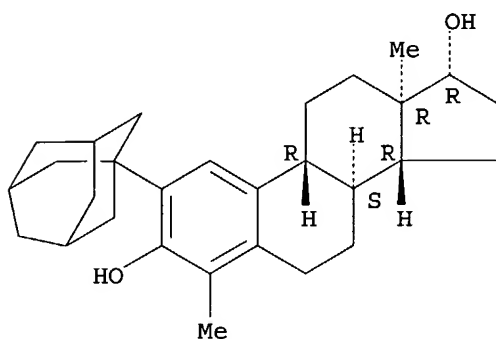
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 11 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422508-94-9 REGISTRY  
CN Estra-1,3,5(10)-triene-3,17-diol, 4-methyl-2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-  
, (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$ )- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C29 H40 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



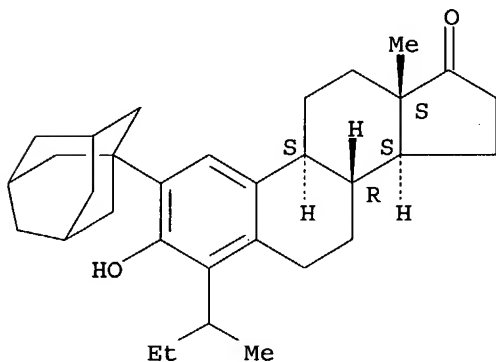
\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 12 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN  
RN 422508-93-8 REGISTRY  
CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-4-(1-methylpropyl)-2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl- (9CI) (CA INDEX NAME)  
FS STEREOSEARCH  
MF C32 H44 O2  
SR CA  
LC STN Files: CA, CAPLUS, USPATFULL

Absolute stereochemistry.



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:369889

L34 ANSWER 13 OF 13 REGISTRY COPYRIGHT 2004 ACS on STN

RN 21003-01-0 REGISTRY

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl)-  
(9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Estra-1,3,5(10)-trien-17-one, 2-(1-adamantyl)-3-hydroxy- (8CI)

OTHER NAMES:

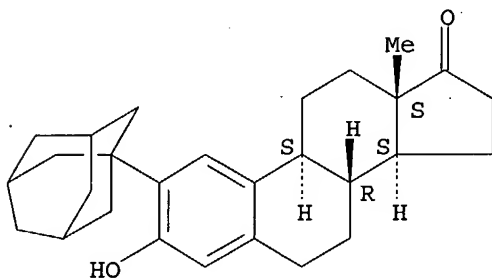
CN ZYC 3

FS STEREOSEARCH

MF C28 H36 O2

LC STN Files: BEILSTEIN\*, CA, CAPLUS, SYNTHLINE, TOXCENTER, USPATFULL  
(\*File contains numerically searchable property data)

Absolute stereochemistry.



## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5 REFERENCES IN FILE CA (1907 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 139:987

REFERENCE 2: 138:101092

REFERENCE 3: 137:135223

REFERENCE 4: 136:369889

REFERENCE 5: 70:29167

=&gt; fil uspatall

FILE 'USPATFULL' ENTERED AT 13:00:46 ON 24 APR 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 13:00:46 ON 24 APR 2004

CA INDEXING COPYRIGHT (C) 2004 AMERICAN CHEMICAL SOCIETY (ACS)

=&gt; d bib abs hitstr tot 139

L39 ANSWER 1 OF 2 USPATFULL on STN

AN 2003:153499 USPATFULL  
 TI Treatment of ophthalmic diseases  
 IN Dykens, James Alan, Encinitas, CA, UNITED STATES  
 Gordon, Katherine, Winchester, MA, UNITED STATES  
 PI US 2003105167 A1 20030605  
 AI US 2002-313172 A1 20021205 (10)  
 PRAI US 2001-336599P 20011205 (60)  
 DT Utility  
 FS APPLICATION  
 LREP BROMBERG & SUNSTEIN LLP, 125 SUMMER STREET, BOSTON, MA, 02110-1618  
 CLMN Number of Claims: 19  
 ECL Exemplary Claim: 1  
 DRWN 2 Drawing Page(s)  
 LN.CNT 975

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method of using protective compounds for the prevention or treatment of ophthalmic diseases, disorders or injuries in a subject. The method comprises the step of administering a predetermined polycyclic phenolic compound to a subject in need thereof. The polycyclic phenolic compound is selected from those having at least one terminal phenolic group and at least one other cyclic group.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

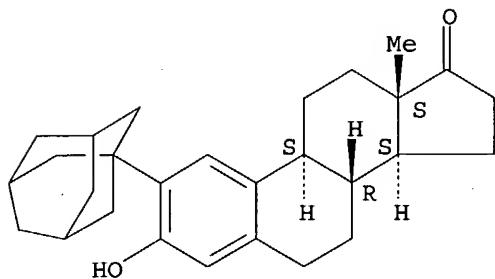
IT 21003-01-0

(in protection of trabecular meshwork cells from glutamate toxicity;  
 polycyclic phenolic compds. for treatment of ophthalmic diseases)

RN 21003-01-0 USPATFULL

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl)-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



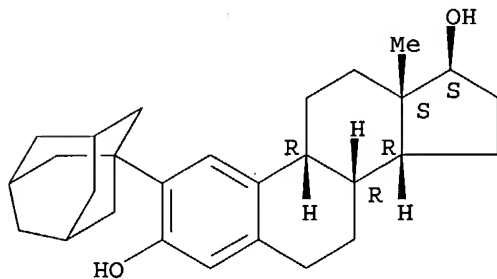
IT 535921-41-6

(polycyclic phenolic compds. for treatment of ophthalmic diseases)

RN 535921-41-6 USPATFULL

CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-,  
 (9 $\beta$ ,14 $\beta$ ,17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L39 ANSWER 2 OF 2 USPATFULL on STN  
 AN 2002:192107 USPATFULL  
 TI Modified, hydroxy-substituted aromatic structures having cytoprotective activity  
 IN Covey, Douglas F., Ballwin, MO, UNITED STATES  
 PA Washington University (U.S. corporation)  
 PI US 2002103178 A1 20020801  
 AI US 2001-7450 A1 20011105 (10)  
 PRAI US 2000-245791P 20001103 (60)  
 DT Utility  
 FS APPLICATION  
 LREP SENNIGER POWERS LEAVITT AND ROEDEL, ONE METROPOLITAN SQUARE, 16TH FLOOR, ST LOUIS, MO, 63102  
 CLMN Number of Claims: 51  
 ECL Exemplary Claim: 1  
 DRWN 7 Drawing Page(s)  
 LN.CNT 1504

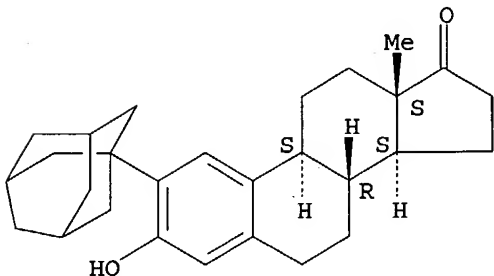
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention is directed to modified, hydroxy-bearing aromatic ring structures having cytoprotective activity. More specifically, in a first embodiment the present invention is directed to phenolic compounds, and in particular steriods (e.g., estrogens), wherein a non-fused polycyclic, hydrophobic substituent is attached to the hydroxy-substituted A-ring thereof. The present invention is further directed to a process for conferring cytoprotection to a population of cells involving the administration of the compound.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

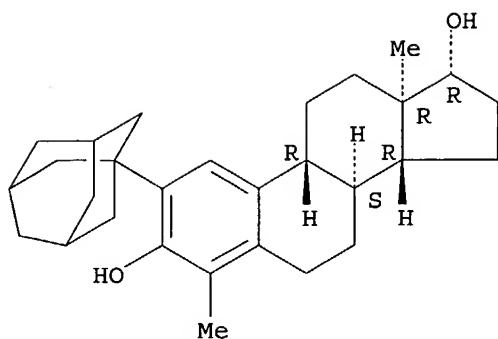
IT 21003-01-0P, ZYC 3 422508-94-9P 422508-95-0P  
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 422509-00-0P 422509-01-1P 422509-02-2P, ZYC  
 26 422566-94-7P, ZYC 33  
 (preparation of estrane derivs. having cytoprotective activity)  
 RN 21003-01-0 USPATFULL  
 CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.3<sup>7</sup>,7]dec-1-yl)-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 422508-94-9 USPATFULL  
 CN Estra-1,3,5(10)-trien-3,17-diol, 4-methyl-2-tricyclo[3.3.1.3<sup>7</sup>,7]dec-1-yl-  
 , (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$ ) - (9CI) (CA INDEX NAME)

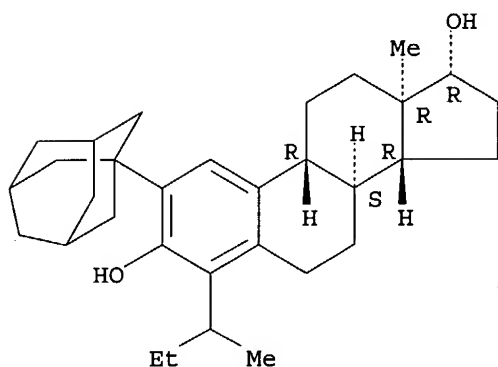
Absolute stereochemistry.



RN 422508-95-0 USPATFULL

CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$  lpha.)- (9CI) (CA INDEX NAME)

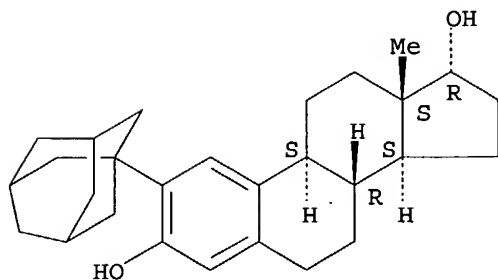
Absolute stereochemistry.



RN 422508-96-1 USPATFULL

CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17 $\alpha$ )- (9CI) (CA INDEX NAME)

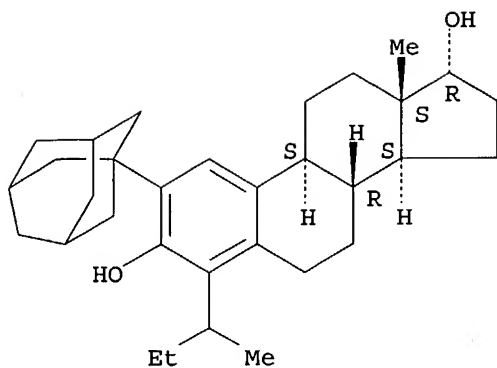
Absolute stereochemistry.



RN 422508-97-2 USPATFULL

CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17 $\alpha$ )- (9CI) (CA INDEX NAME)

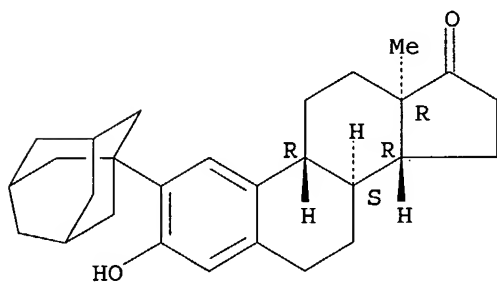
Absolute stereochemistry.



RN 422508-99-4 USPATFULL

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ) - (9CI) (CA INDEX NAME)

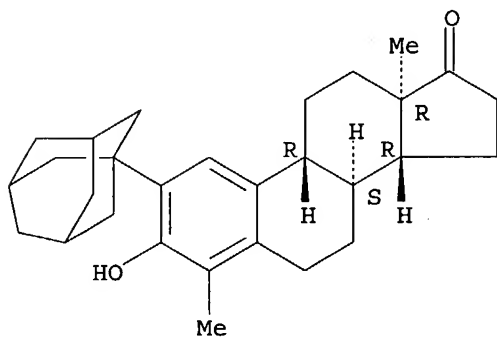
Absolute stereochemistry.



RN 422509-00-0 USPATFULL

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-4-methyl-2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ) - (9CI) (CA INDEX NAME)

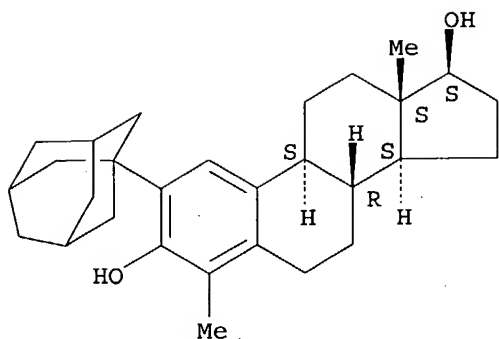
Absolute stereochemistry.



RN 422509-01-1 USPATFULL

CN Estra-1,3,5(10)-triene-3,17-diol, 4-methyl-2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(17 $\beta$ ) - (9CI) (CA INDEX NAME)

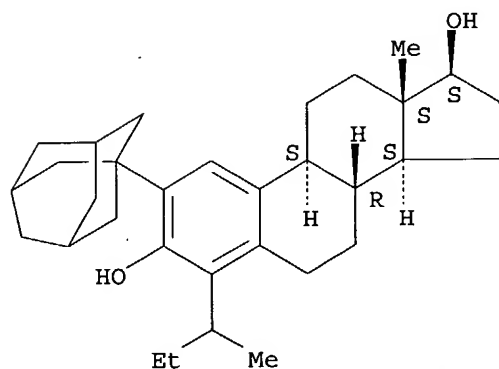
Absolute stereochemistry.



RN 422509-02-2 USPATFULL

CN Estradiol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17 $\beta$ )- (9CI). (CA INDEX NAME)

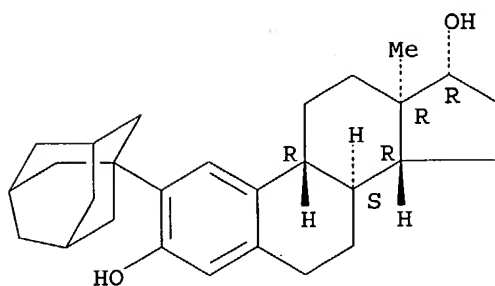
Absolute stereochemistry.



RN 422566-94-7 USPATFULL

CN Estradiol, 2-ethyl-2-methylpropyl-4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (8 $\alpha$ , 9 $\beta$ , 13 $\alpha$ , 14 $\beta$ , 17 $\alpha$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 422508-93-8P

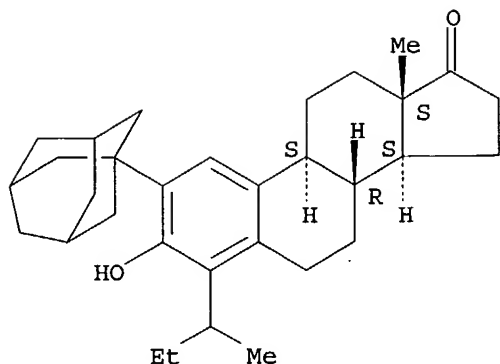
(preparation of estrane derivs. having cytoprotective activity)

RN 422508-93-8 USPATFULL

CN Estradiol, 3-hydroxy-4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.





=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 13:01:07 ON 24 APR 2004

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FILE COVERS 1907 - 24 Apr 2004 VOL 140 ISS 18

FILE LAST UPDATED: 23 Apr 2004 (20040423/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L38 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2003:435321 HCAPLUS

DN 139:987

ED Entered STN: 06 Jun 2003

TI Treatment of ophthalmic diseases with polycyclic phenolic compounds

IN Dykens, James Alan; Gordon, Katherine

PA USA

SO U.S. Pat. Appl. Publ., 13 pp.

CODEN: USXXCO

DT Patent

LA English

IC ICM A61K031-05

NCL 514732000

CC 1-12 (Pharmacology)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2003105167	A1	20030605	US 2002-313172	20021205
	WO 2003047559	A1	20030612	WO 2002-US39098	20021205

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2001-336599P P 20011205

AB The present invention relates to a method of using protective compds. for the prevention or treatment of ophthalmic diseases, disorders or injuries in a subject. The method comprises the step of administering a predetd. polycyclic phenolic compound to a subject in need thereof. The polycyclic phenolic compound is selected from those having at least one terminal phenolic group and at least one other cyclic group. Intraocular administration of 17 $\beta$ -estradiol and ent-17 $\beta$ -estradiol leads to survival of axotomized retinal ganglion cells in adult rats.

ST ophthalmic disease treatment polycyclic phenolic compd; estradiol protection retinal ganglion cell death

IT Biological transport  
(axonal, retrograde, reducing cell death caused by decreased; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Phenols, biological studies

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compds., polycyclic; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Receptors

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(dicarboxylate, cell death caused by overexcitation of; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Carboxylic acids, biological studies

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(dicarboxylic, receptors, cell death caused by overexcitation of; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Neurotransmitters

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)

(excitatory, reducing cell death caused by exposure to; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Eye

(ganglion cell; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Pressure

(hydrostatic, reducing cell death caused by increased; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Apoptosis

Cell death  
(in ophthalmic tissue, reduction of; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Eye, disease

(injury; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Pressure

(intraocular, normalization of; polycyclic phenolic compds. for treatment of ophthalmic diseases)

IT Eye, disease

(optic neuropathy; polycyclic phenolic compds. for treatment of

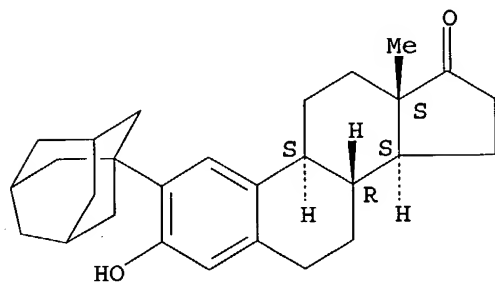
- ophthalmic diseases)
- IT Eye  
(pigment epithelium, protection from cell death; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT Drug delivery systems  
Eye, disease  
Human  
(polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT Necrosis  
Stress, animal  
(reduction of cell death in ophthalmic tissue caused by; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT Neurotrophic factors  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(reducing cell death caused by decreased support by; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT Radical ions  
(reducing cell death caused by exposure to; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT Mitochondria  
(stabilization of structure and function of; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT Eye  
(trabecular meshwork, protection from glutamate toxicity; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 50-28-2, 17 $\beta$ -Estradiol, biological studies 493001-44-8  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(in protection of axotomized retinal ganglion cells; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 104849-43-6 114549-37-0  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(in protection of human retinal pigment epithelial cells from cell death; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 21003-01-0 21003-02-1  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(in protection of trabecular meshwork cells from glutamate toxicity; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 57-91-0, 17 $\alpha$ -Estradiol 535921-41-6  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 14127-61-8, Calcium ion, biological studies  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(reducing cell death caused by acute loading of; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 56-86-0, L-Glutamic acid, biological studies 89-00-9,  
2,3-Pyridinedicarboxylic acid 2552-55-8 67145-93-1, Kainite  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(reducing cell death caused by exposure to; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 125978-95-2, Nitric oxide synthase  
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)  
(reducing cell death caused by overexpression of; polycyclic phenolic compds. for treatment of ophthalmic diseases)
- IT 21003-01-0

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (in protection of trabecular meshwork cells from glutamate toxicity;  
 polycyclic phenolic compds. for treatment of ophthalmic diseases)

RN 21003-01-0 HCAPLUS

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1.3,7]dec-1-yl)-  
 (9CI) (CA INDEX NAME)

Absolute stereochemistry.



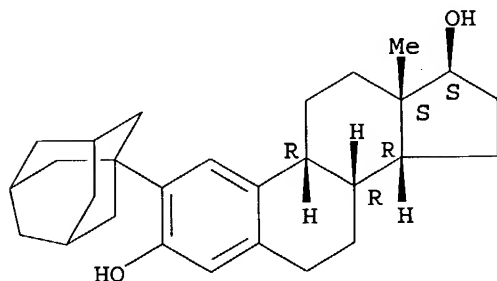
IT 535921-41-6

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
 THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polycyclic phenolic compds. for treatment of ophthalmic diseases)

RN 535921-41-6 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
 (9β,14β,17β)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L38 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:732495 HCAPLUS

DN 138:101092

ED Entered STN: 27 Sep 2002

TI Neuroprotective effects of a novel non-receptor-binding estrogen analogue

AU Liu, Ran; Yang, Shao-Hua; Perez, Evelyn; Yi, Kun Don; Wu, Samuel S.;

Eberst, Kathleen; Prokai, Laszlo; Prokai-Tatrai, Katalin; Cai, Zu Yun;

Covey, Douglas F.; Day, Arthur L.; Simpkins, James W.

CS Health Science Center at Fort Worth, Department of Pharmacology and  
 Neuroscience, University of North Texas, USA

SO Stroke (2002), 33(10), 2485-2491

CODEN: SJCCA7; ISSN: 0039-2499

PB Lippincott Williams & Wilkins

DT Journal

LA English

CC 2-4 (Mammalian Hormones)

AB Although estrogens are neuroprotective, hormonal effects limit their clin.  
 application. Estrogen analogs with neuroprotective function but lacking

hormonal properties would be more attractive. The present study was undertaken to determine the neuroprotective effects of a novel 2-adamantyl estrogen analog, ZYC3. Cytotoxicity was induced in HT-22 cells by 10 mmol/L glutamate. 17 $\beta$ -Estradiol (E2) or ZYC3 was added immediately before the exposure to glutamate. Cell viability was determined by calcein assay. The binding of E2 and ZYC3 to human  $\alpha$  (ER $\alpha$ ) and  $\beta$  (ER $\beta$ ) estrogen receptors was determined by ligand competition binding assay. Ischemia/reperfusion injury was induced by temporary middle cerebral artery occlusion (MCAO). E2 or ZYC3 (100/  $\mu$ g/kg) was administered 2 h or immediately before MCAO, resp. Infarct volume was

determined

by 2,3,5-triphenyltetrazolium chloride staining. Cerebral blood flow was recorded during and within 30 min after MCAO by a hydrogen clearance method. ZYC3 significantly decreased toxicity of glutamate with a potency 10-fold that of E2. ZYC3 did not bind to either ER $\alpha$  or ER $\beta$ .

Infarct volume was significantly reduced to 122.4 and 83.1 mm<sup>3</sup> in E2 and ZYC3 groups, resp., compared with 252.6 mm<sup>3</sup> in the ovariectomized group. During MCAO, both E2 and ZYC3 significantly increased cerebral blood flow in the nonischemic side, while no significant differences were found in the ischemic side. However, E2 and ZYC3 significantly increased cerebral blood flow in both sides within 30 min after reperfusion. The study shows that ZYC3, a non-receptor-binding estrogen analog, possesses both neuroprotective and vasoactive effects, which offers the possibility of clin. application for stroke without the side effects of estrogens. It also suggests that both the neuroprotective and vasoactive effects of estrogen are receptor independent.

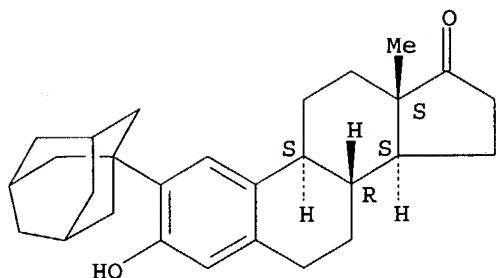
- ST neuroprotection vasodilation adamantyl estrogen analog receptor binding stroke; ZYC3 neuroprotection vasodilation receptor binding stroke
- IT Circulation  
(cerebral; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Reperfusion  
(injury; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Brain, disease  
(ischemia; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Human  
Vasodilators  
(neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Cytoprotective agents  
(neuroprotective; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Brain, disease  
(stroke; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Estrogen receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\alpha$ ; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT Estrogen receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\beta$ ; neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog in stroke model)
- IT 50-28-2, 17 $\beta$ -Estradiol, biological studies  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(neuroprotective and vasoactive effects of non-receptor-binding adamantyl estrogen analog and estradiol in stroke model)
- IT 21003-01-0, ZYC 3  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(neuroprotective and vasoactive effects of non-receptor-binding  
adamantyl estrogen analog in stroke model)

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD  
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- IT 21003-01-0, ZYC 3  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(neuroprotective and vasoactive effects of non-receptor-binding  
adamantyl estrogen analog in stroke model)
- RN 21003-01-0 HCAPLUS
- CN Estr-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1.3,7]dec-1-yl)-  
(9CI) (CA INDEX NAME)

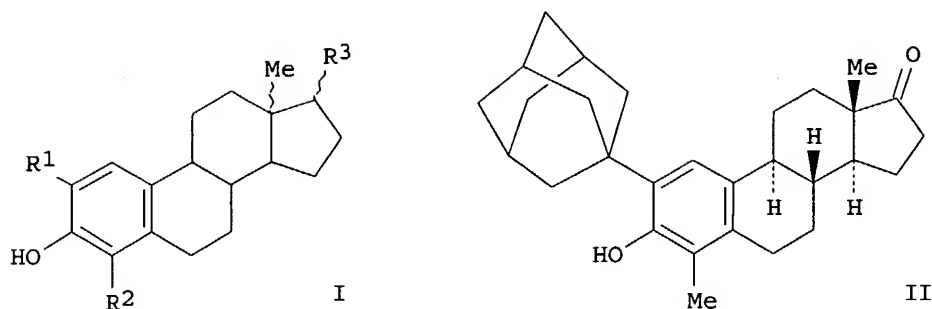
Absolute stereochemistry.



L38 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 2002:353467 HCAPLUS  
 DN 136:369889  
 ED Entered STN: 12 May 2002  
 TI Preparation of estrane derivatives having cytoprotective activity  
 IN Covey, Douglas F.  
 PA Washington University, USA  
 SO PCT Int. Appl., 68 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA English  
 IC ICM C07J001-00  
 ICS A61P039-00; A61K031-565  
 CC 32-3 (Steroids)  
 Section cross-reference(s): 1, 2

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002036605	A2	20020510	WO 2001-US46924	20011105 <--
	WO 2002036605	A3	20020711		
	WO 2002036605	C2	20021017		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2002032509	A5	20020515	AU 2002-32509	20011105 <--
	US 2002103178	A1	20020801	US 2001-7450	20011105 <--
	EP 1330467	A2	20030730	EP 2001-992033	20011105 <--
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
PRAI	US 2000-245791P	P	20001103	<--	
	WO 2001-US46924	W	20011105	<--	
OS	MARPAT 136:369889				
GI					



- AB Estrane derivs., such as I [R<sup>1</sup>, R<sup>2</sup> = non-fused, polycyclic hydrophobic substituent, H, (un)substituted alkyl; R<sup>3</sup> = H, OH, oxo, (un)substituted alkyl], were prepared for their use as cytoprotective agents. Thus, estrane derivative II was prepared via reaction of 3-hydroxy-4-methylestra-1,3,5(10)-trien-17-one and 1-adamantanol. II showed ED<sub>50</sub> = 0.018  $\mu$ M vs. neurons killed by 10 mM glutamate. The present invention was further directed to a process for conferring cytoprotection to a population of cells involving the administration of the compound
- ST estrane deriv prepn cytoprotective neuroprotective
- IT Cytoprotective agents  
(neuroprotective; preparation of estrane derivs. having cytoprotective activity)
- IT Human  
(preparation of estrane derivs. having cytoprotective activity)
- IT Estrogens  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of estrane derivs. having cytoprotective activity)
- IT 3736-22-9, ENT-17 $\beta$ -Estradiol  
RL: PAC (Pharmacological activity); BIOL (Biological study)  
(preparation of estrane derivs. having cytoprotective activity)
- IT 53-16-7, Estrone, reactions 57-91-0, 17 $\alpha$ -Estradiol  
RL: PAC (Pharmacological activity); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
(preparation of estrane derivs. having cytoprotective activity)
- IT 2259-89-4P 2626-12-2P, ZYC 24 21003-01-0P, ZYC 3  
21003-02-1P, ZYC 14 52619-51-9P, ZYC 21 177353-06-9P, ZYC 17  
177353-07-0P, ZYC 15 422508-94-9P 422508-95-0P  
422508-96-1P 422508-97-2P 422508-98-3P  
422508-99-4P 422509-00-0P 422509-01-1P  
422509-02-2P, ZYC 26 422566-88-9P, ZYC 20 422566-89-0P, ZYC 25  
422566-91-4P, ZYC 18 422566-93-6P, ZYC 16 422566-94-7P, ZYC 33  
422567-08-6P, ZYC 34  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of estrane derivs. having cytoprotective activity)
- IT 50-28-2, 17 $\beta$ -Estradiol, biological studies  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(preparation of estrane derivs. having cytoprotective activity)
- IT 75-65-0, tert-Butanol, reactions 768-95-6, Tricyclo[3.3.1.1<sup>3,7</sup>]decan-1-ol 68969-90-4 98543-85-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of estrane derivs. having cytoprotective activity)
- IT 422508-93-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT



(Reactant or reagent)

(preparation of estrane derivs. having cytoprotective activity)

IT 21003-01-0P, ZYC 3 422508-94-9P 422508-95-0P

422508-96-1P 422508-97-2P 422508-99-4P

422509-00-0P 422509-01-1P 422509-02-2P, ZYC 26

422566-94-7P, ZYC 33

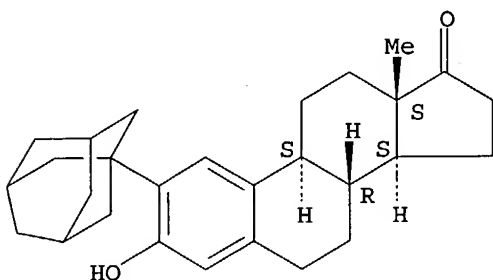
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(preparation of estrane derivs. having cytoprotective activity)

RN 21003-01-0 HCAPLUS

CN Estra-1,3,5(10)-triene-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl)-  
(9CI) (CA INDEX NAME)

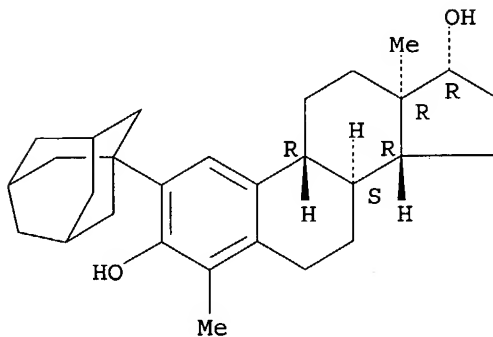
Absolute stereochemistry.



RN 422508-94-9 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 4-methyl-2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-  
, (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$ )- (9CI) (CA INDEX NAME)

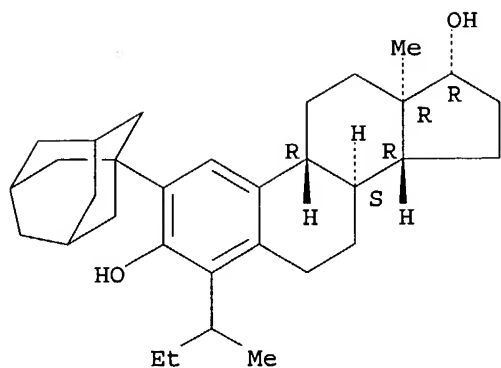
Absolute stereochemistry.



RN 422508-95-0 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-  
tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-, (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$ )-  
ha.)- (9CI) (CA INDEX NAME)

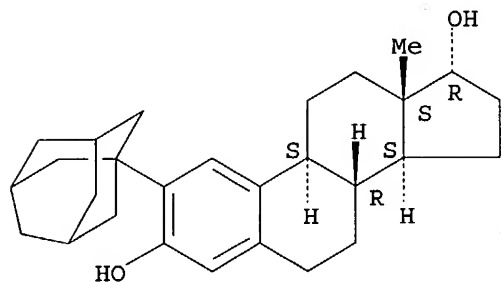
Absolute stereochemistry.



RN 422508-96-1 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(17 $\alpha$ )- (9CI) (CA INDEX NAME)

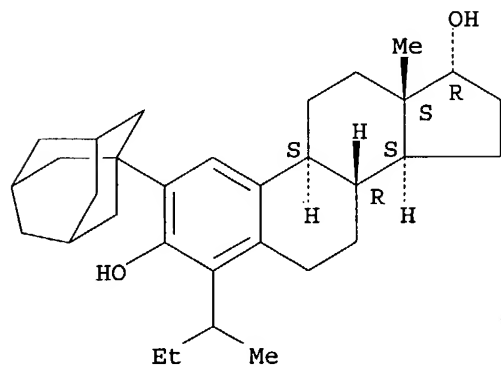
Absolute stereochemistry.



RN 422508-97-2 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17 $\alpha$ )- (9CI) (CA INDEX NAME)

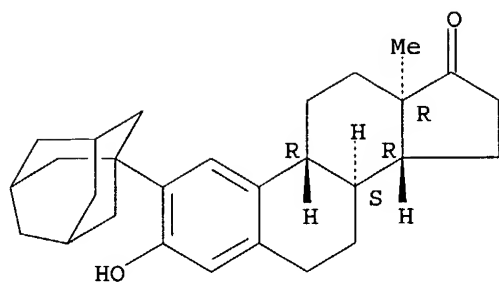
Absolute stereochemistry.



RN 422508-99-4 HCAPLUS

CN Estra-1,3,5(10)-triene-17-one, 3-hydroxy-2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ )- (9CI) (CA INDEX NAME)

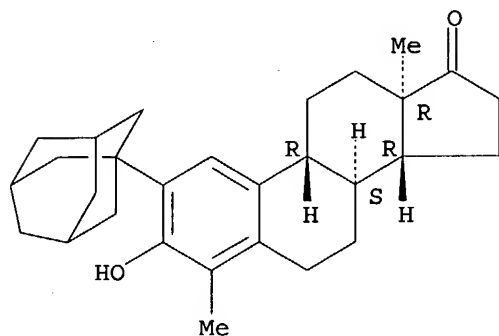
Absolute stereochemistry.



RN 422509-00-0 HCAPLUS

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-4-methyl-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ) - (9CI) (CA INDEX NAME)

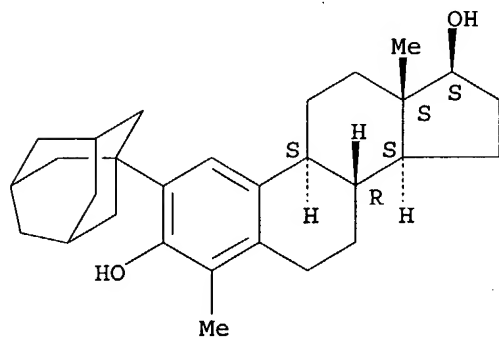
Absolute stereochemistry.



RN 422509-01-1 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 4-methyl-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17 $\beta$ ) - (9CI) (CA INDEX NAME)

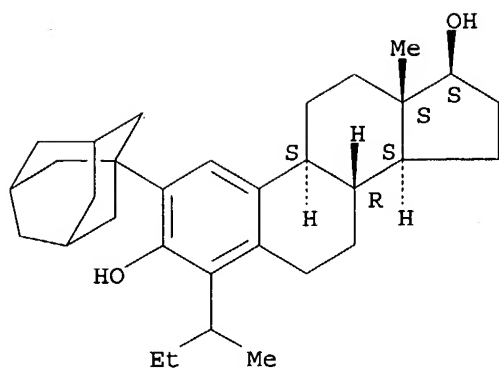
Absolute stereochemistry.



RN 422509-02-2 HCAPLUS

CN Estra-1,3,5(10)-triene-3,17-diol, 4-(1-methylpropyl)-2-tricyclo[3.3.1.1.3,7]dec-1-yl-, (17 $\beta$ ) - (9CI) (CA INDEX NAME)

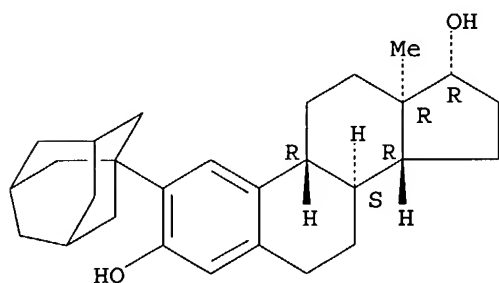
Absolute stereochemistry.



RN 422566-94-7 HCAPLUS

CN Estrane-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1.3,7]dec-1-yl-,  
(8 $\alpha$ ,9 $\beta$ ,13 $\alpha$ ,14 $\beta$ ,17 $\alpha$ ) - (9CI) (CA INDEX NAME)

Absolute stereochemistry.



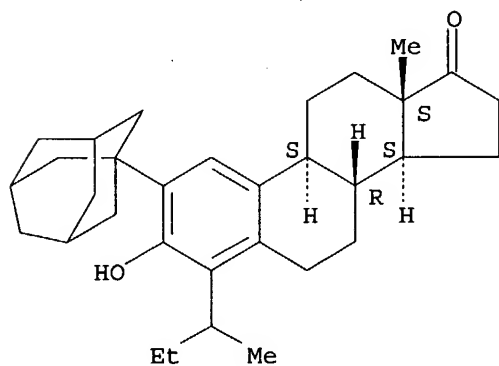
IT 422508-93-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of estrane derivs. having cytoprotective activity)

RN 422508-93-8 HCAPLUS

CN Estrane-1,3,5(10)-trien-17-one, 3-hydroxy-4-(1-methylpropyl)-2-  
tricyclo[3.3.1.1.3,7]dec-1-yl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L38 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:270368 HCAPLUS

DN 137:135223

ED Entered STN: 11 Apr 2002

TI The estrogen receptor is not essential for all estrogen neuroprotection:  
new evidence from a new analog

AU Xia, Shuli; Cai, Zu Yun; Thio, Liu Lin; Kim-Han, Jeong Sook; Dugan, Laura  
L.; Covey, Douglas F.; Rothman, Steven M.

CS Department of Neurology, Washington University School of Medicine, St.  
Louis, MO, 63110, USA

SO Neurobiology of Disease (2002), 9(3), 282-293  
CODEN: NUDIEM; ISSN: 0969-9961

PB Elsevier Science

DT Journal

LA English

CC 2-4 (Mammalian Hormones)  
Section cross-reference(s): 32

AB We synthesized an estrogen analog, ZYC-5, lacking activity at the  
classical estrogen receptor and examined its neuroprotective potential  
against necrosis induced by N-methyl-d-aspartate (NMDA) and  
apoptosis/necrosis induced by the NMDA receptor antagonist  
(+)-3-(2-carboxypiperazine-4-yl)-propyl-1-phosphonic acid (CPP). ZYC-5  
protected cortical neurons in a dose-dependent manner, and the  
neuroprotection was more robust than with 17 $\beta$ -estradiol. The effect  
of ZYC-5 was not mediated by the classical estrogen receptor, because it  
was unaffected by the antagonists 4-hydroxytamoxifen and ICI 182,780. The  
ZYC-5 protection against excitotoxicity was not directly mediated through  
the NMDA receptor, because there was no effect of ZYC-5 on NMDA current or  
the intracellular calcium increase induced by NMDA. Results obtained with  
the free-radical-sensitive dye, dihydroethidium, suggested that the  
neuroprotection of ZYC-5 was partly related to its radical scavenging  
properties. Although some of estrogen's neuroprotective effects may  
depend upon the estrogen receptor, our results suggest the possibility of  
neuroprotection without hormonal side effects.

ST estrogen analog ZYC5 prepn neuroprotection

IT Glutamate receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(NMDA-binding; preparation of estrogen analog (ZYC-5) that shows  
neuroprotection not mediated by estrogen receptors or NMDA receptors)

IT Brain  
(cortex; preparation of estrogen analog (ZYC-5) that shows neuroprotection  
not mediated by estrogen receptors or NMDA receptors)

IT Nerve, disease  
Nerve, disease  
(death; preparation of estrogen analog (ZYC-5) that shows neuroprotection  
not mediated by estrogen receptors or NMDA receptors)

IT Cell death  
Cell death  
(neuron; preparation of estrogen analog (ZYC-5) that shows neuroprotection  
not mediated by estrogen receptors or NMDA receptors)

IT Cytoprotective agents  
(neuroprotective; preparation of estrogen analog (ZYC-5) that shows  
neuroprotection not mediated by estrogen receptors or NMDA receptors)

IT Radical scavengers  
(preparation of estrogen analog (ZYC-5) that shows neuroprotection in  
relation to its radical scavenging properties)

IT Estrogen receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(preparation of estrogen analog (ZYC-5) that shows neuroprotection not  
mediated by estrogen receptors or NMDA receptors)

IT 444571-93-1P, ZYC 5  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(preparation of estrogen analog (ZYC-5) that shows neuroprotection not  
mediated by estrogen receptors or NMDA receptors)

IT 21003-01-0

RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of estrogen analog (ZYC-5) that shows neuroprotection not  
mediated by estrogen receptors or NMDA receptors)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

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IT 444571-93-1P, ZYC 5

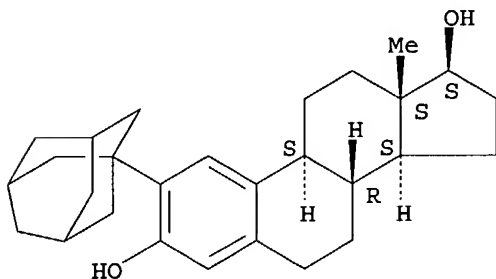
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(preparation of estrogen analog (ZYC-5) that shows neuroprotection not  
mediated by estrogen receptors or NMDA receptors)

RN 444571-93-1 HCAPLUS

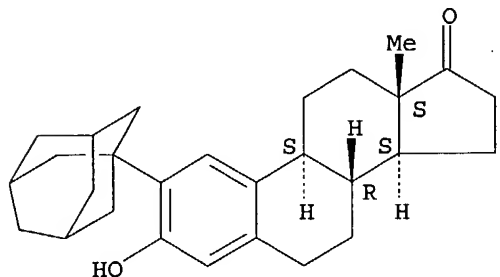
CN Estra-1,3,5(10)-triene-3,17-diol, 2-tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl-,  
(17 $\beta$ )- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 21003-01-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of estrogen analog (ZYC-5) that shows neuroprotection not  
 mediated by estrogen receptors or NMDA receptors)  
 RN 21003-01-0 HCAPLUS  
 CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl)-  
 (9CI) (CA INDEX NAME)

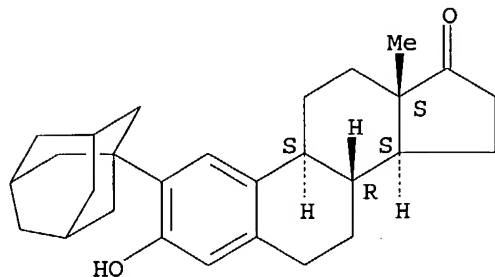
Absolute stereochemistry.



L38 ANSWER 5 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 AN 1969:29167 HCAPLUS  
 DN 70:29167  
 ED Entered STN: 12 May 1984  
 TI Adamantyl carbonium ion as a dehydrogenating agent; its reactions with  
 estrone  
 AU Lunn, W. H. W.; Farkas, Eugene  
 CS Lilly Res. Lab., Eli Lilly and Co., Indianapolis, IN, USA  
 SO Tetrahedron (1968), 24(23), 6773-6  
 CODEN: TETRAB; ISSN: 0040-4020  
 DT Journal  
 LA English  
 CC 32 (Steroids)  
 OS CASREACT 70:29167  
 GI For diagram(s), see printed CA Issue.  
 AB An unusual and useful dehydrogenation of estrone to  $\Delta^9(11)$ -estrone  
 (I) occurred on its reaction with the adamantyl carbonium ion. With  
 modified conditions both tert-Bu and adamantyl carbonium ion sources gave  
 2-substituted estrone derivs. in this reaction.  
 ST adamantyl carbonium ion estrone; carbonium ion adamantyl estrone; estrone  
 dehydrogenation; dehydrogenation estrone  
 IT Dehydrogenation catalysts  
 (adamantyl carbonium ions as, for estrone)  
 IT 19-Norsteroids  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (dehydrogenation of)  
 IT Carbonium compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (in dehydrogenation of estrone)  
 IT 21003-01-0P 21003-02-1P 21003-03-2P 21003-04-3P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 IT 53-16-7, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (with adamantyl carbonium ions)  
 IT 21003-01-0P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of)  
 RN 21003-01-0 HCAPLUS

CN Estra-1,3,5(10)-trien-17-one, 3-hydroxy-2-(tricyclo[3.3.1.1<sup>3,7</sup>]dec-1-yl)-  
(9CI) (CA INDEX NAME)

Absolute stereochemistry.



=>